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1.\ An electrical machine comprisi:	ng :
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- a stator core having slots;
- a set of windings disposed within said slots,
- 4 said set of windings having 2N+1 phases where N is an
- 5 integer greater than 1.
- 2. An electrical machine as recited in claim 1 years wherein said set of windings is coupled to a common node.
- 1 An electrical machine as recited in claim 1 pure wherein said set of windings is coupled polygonally.
- 4. An electrical machine as recited in claim 1 further comprising a switching circuit coupled to said set of windings, said switching circuit comprising at least 2(2N+1) switching elements.
- 1 \checkmark 5. An electrical machine as recited in claim 4 further comprising a full wave rectifier.
- 1 \mathcal{H} 6. An electrical machine as recited in claim 1 wherein N=2.
- 1 \checkmark 7. An electrical machine as recited in claim 1 wherein N=3.
- 1 8. An electrical machine as recited in claim 1 wherein said electrical machine comprises a generator.
- 9. An electrical machine as recited in claim 1 wherein said set of windings has a full pitch.

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	10	. An	ı e	lectrical	mac	hi	ne	as	recit	ced	in	claim	1
wherein	said	set	of	windings	has	а	fra	acti	onal	pit	ch.	•	

11. An alternator for an automotive vehicle comprising:

a housing;

- a rotor rotatably disposed within said housing;
- a stator core disposed within said housing adjacent to said rotor, said stator core having slots; and
- a set of windings disposed within said slots, said set of windings having 2N+1 phases where N is an integer greater than 1.
- 12. An alternator as recited in claim 11 further comprising a full wave rectifier.
- 13. An alternator as recited in claim 11 wherein said set of windings is coupled to a common node.
- A 14. An alternator as recited in claim 11 wherein said set of windings is coupled schematically in a polygon.
- 1 15. An alternator as recited in claim 14 wherein said polygon has 2N+1 sides.
- 1 16. An alternator as recited in claim 11 2 further comprising a rectifier circuit coupled to said 3 first set of windings, said rectifier circuit comprising 4 at least 2(2N+1) rectifying elements.
- 1 An alternator as recited in claim 11 wherein N=2.

1	18. An alternator as recited in claim 11
2	wherein N=3.
1	19 An alternator for an automotive vehicle
2	comprising:
3	_a housing;
4	a rotor rotatably disposed within said housing;
5	a stator core disposed within said housing
6	adjacent to said rotor, said stator core having slots;
7	_a set of windings disposed within said slots,
8	said set of windings having 2N+1 phases where N is an
9	integer greater than 1; and
10	full wave rectifier circuit coupled to said
11	set of windings, said rectifier circuit comprising at
12	least 2(2N+1) rectifying elements.
1	20. An alternator as recited in claim 19
2	wherein said set of windings is coupled to a common node.
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1	21. An alternator as recited in claim 19 (
2	wherein said set of windings is coupled schematically in a
3	polygon.